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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,485	04/01/2004	Yoshihiro Tomita	10873.1433US01	1214
53148	7590	04/04/2006	EXAMINER	
HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402			PATEL, ISHWARBHAI B	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,485

Applicant(s)

TOMITA ET AL.

Examiner

Ishwar (I. B.) Patel

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) 8-24 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/1/4, 6/14/4, 6/9/5.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of group I, specie 6, reading on figure 6A, claims 1-7, in the reply filed on March 10, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). However, as stated in previous action, upon allowance of a generic claim, additional claims which depend from or include all the limitations of an allowable generic claim, will be rejoined and will be fully examined for the patentability.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received placed of record in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Argyrakis (US Patent No. 5,573,109).

Regarding claim 1, Argyrakis, in figure 1, discloses a wiring board, comprising: a plurality of conductive layers (12, 14, 16) each including one or more wirings for transmitting signals (column 2, line 35-37); and a plurality of insulation layers (26, 27, 28, 29, 30) for insulating the respective conductive layers; wherein the conductive layers and the insulation layers are laminated alternately (see figure), and each of the plurality of conductive layers is provided with a terminal at at least one of both ends (terminals at the ends, see figure), wherein the terminals are formed stepwise and separated by the insulation layers in a cross-sectional shape of a lamination structure of the conductive layers and the insulation layers (see figure).

Regarding claim 2, Argyrakis discloses all the features of the claimed invention as applied to claim 1 above. The conductive layers and the insulation layers are formed in an atmosphere at a reduced pressure below the atmospheric pressure is a process limitation in a product claim. Such a process limitation defines the claimed invention over the prior art to the degree that it defines the product itself. A process limitation cannot serve to patentably distinguish the product over the prior art, in the case that the product is same as, or obvious over the prior art. See Product-by-Process in MPEP § 2113 and 2173.05(p) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964, 966 (Fed. Cir. 1985). This is structural claim. Argyrakis discloses the structure. Therefore, Argyrakis meets the limitation.

Regarding claim 3, Argyrakis further discloses the plurality of conductive layers are three or more thin film conductive layers (12, 14, 16).

Regarding claim 4, Argyrakis further discloses one or more conductive layers among the plurality of conductive layers comprise a plurality of wirings (electrically conductive signal carrying conductors, column 2, line 35-38).

Regarding claim 5, Argyrakis further discloses the number of wirings included in one of the plurality of conductive layers and the number of wirings included in another conductive layer of the plurality of conductive layers are different from each other (as some of the layers include the strip line conductors along with the signal conductors, column 2, line 50-55).

Regarding claim 6, Argyrakis further discloses at least two conductive layers among the plurality of conductive layers comprise a shield layer for shielding a wiring in another conductive layer sandwiched between the two conductive layers (column 2, line 49-55).

Regarding claim 7, Argyrakis further discloses one or more conductive layers among the plurality of conductive layers comprise a plurality of wirings, and each of the plurality of wirings comprises the terminal (, see figure, column 2, line 34-55).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liberkowski (US Patent No. 5,623,160), in figure 2, discloses a wiring board (an interconnect structure) including plurality of insulating layer and conductive layers with stepwise terminals.

Inasaka (US Patent No. 5,136,471), in figure 1, discloses a wiring board having plurality of insulating layer and conductive layers with stepwise terminals.

Holbet (US Patent No. 4,450,029), in figure 1, discloses a wiring board having plurality of insulating layer and conductive layers with stepwise terminals.

Ramey (US Patent No. 6,479,765), in figure 10, discloses a wiring board having plurality of insulating layer and conductive layers with stepwise terminals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

Art Unit: 2841

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272 1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ishwar (I. B.) Patel
Examiner
Art Unit: 2841
March 26, 2006